



Fish Passage Center

Weekly Report #01 - 9

May 11, 2001

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SIGNIFICANT POINTS

- **Downstream migration flows at Lower Granite Dam averaged 48.7 kcfs this past week, well below the minimum migration requirement of 85 kcfs identified in the Biological Opinion and 117.5 kcfs at McNary, well below the 220 kcfs, identified in the Biological Opinion.**
- **A lower River spill program has not yet been worked out for the 2001 juvenile migration.**
- **Passage indices of both yearling chinook and steelhead at Lower Granite Dam decreased substantially this past week.**

SUMMARY OF EVENTS:

Water Supply: Precipitation continues to be average and above average for most of the region. The cumulative precipitation for October through May 8 for the Columbia above Grand Coulee was 66% of average, for the Columbia above The Dalles, 67% of average, and for the Snake River above Ice Harbor, 75% of average. For the period of May 1-8, the highest precipitation was recorded at East Slope Washington at 169% of average, and the lowest precipitation was recorded at Owyhee/Malheur at 4% of average.

The May Final Runoff Volume Forecast was issued. Due to increased precipitation in the system, the estimated runoff volumes were higher than the April Final Runoff Volume Forecasts for most of the projects. The highest increase was projected at Libby (3%). At the same time, there is significant decrease (4%) in projected Runoff Volumes at the Upper Columbia project, Mica. The Summary of the Runoff Volume Forecasts is given in the following Table:

Site	March Final		April Final		May Final	
	Runoff Volume [KAF]	% of avg	Runoff Volume [KAF]	% of avg	Runoff Volume [KAF]	% of avg
<i>Mica (April-Sept.)</i>	9620	76	9800	77	9300	73
<i>Hungry Horse (Apr-Sep)</i>	1320	60	1300	60	1330	61
<i>Libby (April-Sept.)</i>	3570	53	3530	52	3740	55
<i>Grand Coulee (Jan-July)</i>	37600	59	37500	59	37800	60
<i>The Dalles (Jan-July)</i>	58600	55	56100	53	56500	53
<i>Brownlee (April-July)</i>	2390	41	1890	33	1950	34
<i>Dworshak (April-July)</i>	1550	57	1400	52	1440	53
<i>Lower Granite (Jan-July)</i>	16300	55	14100	47	14100	47
<i>Heise (ID) (April-July)</i>	2170	63	2030	59	2040	59
<i>Weiser (ID) (April-July)</i>	2230	41	1730	32	1780	33

Reservoir Operations: Reservoirs continue to be operated for power emergency needs and were far below the required end of month flood control elevations. Reservoirs will not refill by the end of June as required by the 2000 Biological Opinion. A summary of the actual elevations and required flood control elevations at the end of May is shown in the following Table:

Reservoir	Actual Elev. as of May 10, 2001 [ft]	Maximum Reservoir pool [ft]
<i>Libby</i>	2389.85	2459
<i>Hungry Horse</i>	3498.50	3560
<i>Grand Coulee</i>	1233.00	1290
<i>Brownlee</i>	2076.20*	2077
<i>Dworshak</i>	1544.67	1600

*as of May 10

Libby reservoir continues at a minimum outflow of 4 kcfs. Inflows increased to the range of 5.8 kcfs to 10.7 kcfs for the period of May 4-10.

Hungry Horse was operated at minimum outflow of 0.5 kcfs for the period of May 4-10. Required minimum flows of 3.5 kcfs at Columbia Falls are being met by increased local inflows. Inflows into the reservoir were fluctuating between 4.89 kcfs and 8.01 kcfs for the period of May 4-10.

Grand Coulee was operated to meet system power peaking demands and to refill. The current outflows were in the range of 39.9 kcfs-70.0 kcfs for the period of May 4-10. For the same period, inflows were in the range of 82.5 kcfs-99.9 kcfs.

Brownlee reservoir elevations were fluctuating between 2076.13 ft and 2076.40 ft. The outflows at Hells Canyon Dam project were in the range of 8.51 kcfs to 14.03 kcfs for the period of May 4-10. The Brownlee inflows were in the range of 9.43 kcfs to 11.11 kcfs for the same period.

Dworshak continued to be operated on minimum outflow of 1.6 kcfs-1.7 kcfs. Inflow was fluctuating from 8.8 kcfs on May 7 to 10.2 kcfs on May 5.

Upper Snake projects were drafted due to irrigation demands, from 80% of capacity on May 4 to 77% of capacity on May 10. American Falls is at 91% of capacity, Palisades is at 52% of capacity and Jackson Lake is at 80 % of capacity. Flow below Milner is only 227 cfs.

Flows: Flows decreased in the system for the May 4-10 period, after a short period of increase the previous week. Flows below Bonneville fluctuated between 109.3 kcfs and 148.1 kcfs for the period of May 4-10, depending upon power generation demands.

Flows at Priest Rapids fluctuated between 54.7 kcfs and 68.8 kcfs for the period of May 4-10.

The 1995 Biological Opinion spring flow target is 85 Kcfs at Lower Granite beginning April 10. Current flows were in the range of 43.2 kcfs on May 7 to 53.3 kcfs on May 10. The average daily flow for the period of May 4-10 was 48.7 kcfs.

The 1995 Biological Opinion spring flow target at McNary is 220 kcfs, beginning April 20.

The average daily flow for the period of May 4-10 was 117.5 kcfs, with fluctuations between 107.2 kcfs on May 8 to 132.5 kcfs on May 4.

Spill: The Technical Management Team developed a recommendation to begin spill on May 9, 2001 if a spill program were to be provided. However, the decision regarding the provision of a reduced spill program has not yet been made and there was no spill in the federal power system this past week. The FERC fish spill program continues at the Mid Columbia projects. Total dissolved gas readings at most monitors are reading in excess of 100%. Some of the recent increased levels of TDGS may be attributed to the Mid Columbia fish spill program, but some of the present readings are in excess of the concentrations anticipated based on the spill occurring only in the Mid Columbia River. Fish with bubbles in their lateral line have been sampled at both McNary and Rock Island dams.

Smolt Monitoring: Yearling chinook numbers were dropping rapidly this week and steelhead numbers, though also dropping from last week's peaks, were making up most of this week's collection at the traps on the lower Salmon (WTB), Grande Ronde (GRN), and Imnaha (IMN) rivers. The mainstem Snake River trap at Lewiston (LEW), which was ineffective in collecting yearling chinook this season, has been collecting an average of over 250 fish/day this week. Yearling chinook collections at Lower Granite Dam have dropped from a peak of 155,400 fish on May 1 to 18,000-70,000 fish this sampling week, while steelhead collection have dropped from a peak of nearly 350,000 for 3 days around May 1 to 60,000-210,000 fish this sampling period. Passage indices at Rock Island Dam began increasing rapidly the last two days of this reporting period to nearly 200 yearling chinook and more than 300 steelhead. Daily yearling chinook and steelhead collections at McNary Dam have fluctuated this week around 20,000 and 6,000 fish, respectively. John Day Dam collections of yearling chinook continued fairly steady this week, while steelhead collections decreased throughout the week (ending the week at 1,300 fish, well below last week's high of 24,600 fish on May 1). Subyearling chinook

passage indices followed a decreasing trend this week at Bonneville Dam, while passage indices of yearling chinook, steelhead, and coho followed an increasing trend. The greatest change in passage at Bonneville Dam was with coho, which started last week with just a few hundred fish per day and reach a high of nearly 30,000 fish on May 8.

Hatchery Releases – See the Hatchery Release Summary for the previous two-week and next two week projected releases for the Columbia River Basin above Bonneville Dam.

Snake River – Release of yearling chinook is completed for this 2001 migration season. Approximately 4.16 million spring and summer chinook were released this year and include a small number released last fall. Hatchery release of yearling fall chinook is also completed for the season, with approximately 450,000 yearling fall chinook released directly from Lyons Ferry Hatchery and 343,000 released from the Acclimation Ponds at Captain Johns, Pittsburg Landing (Snake River) and Big Canyon (Clearwater River). About 580,000 coho were released into the Clearwater R basin. Steelhead releases are on-going from many hatcheries but the bulk will be in river by the end of next week with only volitional releases remaining. About 9.87 million juvenile steelhead will be released in the Snake River basin for the 2001 migration season. A small release of yearling sockeye salmon were released into Redfish Lake Creek during the week.

Mid-Columbia [above McNary Dam] – Volitional releases of spring chinook from the Acclimation Ponds in the Yakama River began mid-March and will continue through May. Approximately 3.3 million yearling spring chinook will be released in the Mid-Columbia River Zone for the 2001 migration season. About 241,000 sockeye salmon were released into Lake Wenatchee from net pens and into Lake Osoyoos (direct releases) during the fall prior to their migration this April through May. Release of yearling summer chinook has been completed for this season with subyearling summer chinook scheduled for release in June. About 4.3 million summer chinook are

scheduled for release in the mid-Columbia Reach. Hatchery steelhead releases continued this week with most juvenile steelhead scheduled for release by mid-May. Numbers scheduled for release will be almost normal (1.34 million) in this Reach. The Wenatchee, Entiat, Methow, Okanogan and main Columbia (Ringold Hatchery release) rivers will be planted with the “threatened” status steelhead from WDFW and USFWS hatcheries. Steelhead from Lyons Ferry Hatchery will be released into the Walla Walla River basin, but are not considered part of the listed steelhead. The scheduled release of yearling coho will be an estimated 2.1 million for the season; a record high for the Mid-Columbia River Zone. Coho have been released into the Methow and Wenatchee river with additional coho scheduled for the Yakama River.

Lower Columbia [McNary Dam to above Bonneville Dam] – Yearling spring chinook from State, Federal, and Tribal facilities are completed for the year. Spring chinook have been released in the Umatilla, Klickitat, Deschutes, Hood, Wind, and Little White Salmon rivers to date. The estimated total of hatchery spring Chinook is 5.9 million in this River Zone; about 500,000 subyearling spring chinook have been released into the White Salmon River and another 160,000 into the upper Klickitat River. About 10.6 million subyearling tule fall chinook were released from Spring Creek National Fish Hatchery this season. Yearling releases of “bright” fall chinook were made in March and April in the Umatilla River; all other fall chinook released will be subyearling fish that will be planted in late May or June. All coho salmon have been released in the Umatilla River, Klickitat River, and Little White Salmon River basins for the 2001 migration. About 6.6 million coho salmon will be released in this Reach for the 2001 season. Steelhead have been released in the Umatilla River with the Little White Salmon, Klickitat, and Hood River basins receiving steelhead in late April through early to mid May.

Adult Fish Passage – Fish counting started April 1 at most COE projects; currently all COE projects are counting adult fish passing mainstem Columbia and Snake River dams. The PUD projects on the Mid-Columbia River began counting on April 15 at Priest Rapids, Rock Island, and Rocky Reach dams with Wells Dam initiating counting on May 1. The Fish Passage Center Weekly Report will list in a table; the adult fish counts for the week with the previous year (2000) and the 10-year averages through the same ending date so the reader can compare passage throughout the year for the individual species.

At Bonneville Dam, adult spring chinook salmon counts averaged 3,948 per day for the week with the daily peak count of 8,026 on May 4. The total count is now 345,879 through May 10 and compares with 159,412 in 2000 and 60,224 for the 10-year average. The 2001 count is about 2.2 times and 5.7 times greater than the respective 2000 and 10-year average. As a point of interest, PIT tag detections at Bonneville Dam Sampling Facility indicate that adult summer chinook salmon from the South Fork Salmon River are now passing the dam in increasing numbers on a daily basis. At The Dalles Dam, 252,989 adult salmon have been counted through May 8. The McNary Dam count through May 10 is 205,787, with 130,196 adult spring chinook (Ice Harbor Count) continuing up the Snake River and 37,407 counted at Priest Rapids Dam. More than 7,000 adult spring chinook have been counted at Prosser Dam, located on the Yakama River, to date. Counts from Ice Harbor, Priest Rapids, and Prosser account for about 85% of the adult spring Chinook salmon that have passed McNary Dam. Up the Mid-Columbia River, about 22,437 adult spring chinook have passed Rock Island Dam with 7,877 passing Rocky Reach Dam through May 7 and 6, respectively and Wells Dam counting 3,610 through May 9. At Lower Granite Dam, more than 115,000 adult spring chinook have been tallied past the counting window. The bulk of fish passing the project are hatchery origin fish with the majority having an adipose clip to distinguish the hatchery from the wild fish. Jack chinook counts at Bonneville Dam appear to have peaked during the past week with

the counts ranging between 439 and 1,012 and through May 10 totaled 7,528. This jack count increased to 2.7 times greater than the 10-year average and was about half the record 2000 jack spring chinook count.

Steelhead passage ranged between 47 and 102/day through the week at Bonneville Dam with the total through May 10 of 3,609. At Lower Granite Dam, steelhead counts have decreased to about 10 per day during the week with 5,634 counted since March 1. Most steelhead passing the project are those that have over-wintered in the Snake or Columbia rivers.

Lower Granite Dam – Adult Trap: Injury Summary

	Sample	Number	Percent
Gillnet	369	29	7.9
Marine Mammal Descaled	369	64	17.3
Marine Mammal Flesh Wound	369	35	9.5
Headburns	369	3	0.8

Daily Average Flow and Spill (in kcfs) at Mid-Columbia Projects

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Rock Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
04/27/01	52.8	0.0	56.7	0.0	61.6	5.0	56.5	0.0	63.2	13.5	75.4	32.8	66.4	40.6
04/28/01	34.1	0.0	38.7	0.0	40.7	3.1	40.0	0.0	44.5	9.7	74.0	32.0	66.2	40.4
04/29/01	43.5	0.0	42.4	0.0	43.1	3.6	43.2	0.0	47.9	9.1	72.8	31.2	66.7	40.4
04/30/01	62.5	0.0	60.4	0.0	64.5	5.0	64.8	0.0	70.2	14.4	77.1	33.3	67.9	41.0
05/01/01	55.4	0.0	58.0	0.0	61.6	5.0	61.4	0.0	65.7	12.8	84.9	36.6	73.5	44.6
05/02/01	52.5	0.0	55.7	0.0	62.0	5.2	60.1	0.0	64.2	13.5	81.9	35.6	71.2	43.3
05/03/01	60.9	0.0	62.3	0.0	61.4	5.0	60.7	0.0	64.4	12.8	67.5	29.2	68.8	42.0
05/04/01	61.5	0.0	61.1	0.0	65.5	5.6	64.9	0.0	67.2	14.1	85.7	36.9	67.8	41.3
05/05/01	46.1	0.0	49.3	0.0	54.6	4.9	55.4	0.0	59.5	12.5	79.2	34.1	68.2	41.7
05/06/01	39.9	0.0	39.3	0.0	39.2	3.9	35.5	0.0	38.1	9.1	80.9	34.7	68.8	42.2
05/07/01	57.8	0.0	59.0	0.0	62.7	6.5	62.8	0.0	66.4	13.8	66.7	28.6	65.6	40.4
05/08/01	59.0	0.0	60.7	0.0	62.0	7.2	61.1	0.0	64.1	13.6	78.5	33.8	61.1	37.4
05/09/01	62.3	0.0	65.7	0.0	71.6	8.1	73.9	0.0	78.6	15.7	67.5	29.1	56.5	34.4
05/10/01	70.0	0.0	72.7	0.0	71.4	7.2	71.3	0.0	75.8	15.2	64.7	28.1	54.7	33.6

Daily Average Flow and Spill (in kcfs) at Snake Basin Projects

Date	Dworshak		Brownlee Canyon		Hells Granite		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
04/27/01	1.7	0.0	10.7	12.4	46.0	0.0	47.8	0.0	50.2	0.0	49.9	0.0	59.3	0.0
04/28/01	1.7	0.0	10.7	7.5	57.9	0.0	58.9	0.0	61.7	0.0	59.3	0.0	60.3	0.0
04/29/01	1.6	0.0	11.5	7.4	58.7	0.0	58.9	0.0	59.7	0.0	58.5	0.0	58.5	0.0
04/30/01	1.6	0.0	11.5	7.4	54.8	0.0	56.8	0.0	59.5	0.0	69.9	0.0	58.5	0.0
05/01/01	1.6	0.0	11.3	10.4	68.1	0.0	68.6	0.0	71.5	0.0	62.2	0.0	53.9	0.0
05/02/01	1.6	0.0	10.9	9.2	59.4	0.0	60.6	0.0	64.1	0.0	62.2	0.0	53.9	0.0
05/03/01	1.6	0.0	11.0	9.7	56.2	0.0	57.5	0.0	61.5	0.0	61.0	0.0	53.9	0.0
05/04/01	1.7	0.0	11.1	14.0	50.0	0.0	52.3	0.0	55.0	0.0	53.9	0.0	53.9	0.0
05/05/01	1.7	0.0	9.8	9.1	50.2	0.0	52.3	0.0	55.0	0.0	53.9	0.0	53.9	0.0
05/06/01	1.6	0.0	9.4	8.5	45.5	0.0	44.9	0.0	46.7	0.0	45.5	0.0	45.5	0.0
05/07/01	1.7	0.0	10.5	12.9	43.2	0.0	44.9	0.0	46.9	0.0	48.0	0.0	48.0	0.0
05/08/01	1.6	0.0	10.0	11.4	49.1	0.0	48.7	0.0	50.1	0.0	47.6	0.0	47.6	0.0
05/09/01	1.7	0.0	9.4	9.9	49.4	0.0	50.3	0.0	51.5	0.0	55.5	0.0	55.5	0.0
05/10/01	1.6	0.0	---	---	53.3	0.0	54.3	0.0	57.5	0.0	56.3	0.0	56.3	0.0

Daily Average Flow and Spill (in kcfs) at Lower Columbia Projects

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
04/27/01	112.9	0.0	125.0	0.0	126.6	0.0	131.6	0.0	17.1	106.2
04/28/01	113.3	0.0	94.4	0.0	92.3	0.0	107.5	0.0	4.2	95.1
04/29/01	132.5	0.0	133.5	0.0	136.2	0.0	141.7	0.0	21.9	111.6
04/30/01	130.5	0.0	137.6	0.0	137.2	0.0	146.5	0.0	26.3	112.7
05/01/01	135.7	0.0	143.9	0.0	146.5	0.0	160.6	0.0	38.9	113.9
05/02/01	140.0	0.0	159.9	0.0	157.2	0.0	161.9	0.0	31.8	122.0
05/03/01	125.9	0.0	138.5	0.0	139.8	0.0	152.4	0.0	26.9	117.4
05/04/01	132.5	0.0	139.4	0.0	137.6	0.0	142.9	0.0	26.3	108.4
05/05/01	121.9	0.0	128.0	0.0	127.2	0.0	134.9	0.0	18.0	108.8
05/06/01	112.1	0.0	126.7	0.0	132.8	0.0	148.1	0.0	30.8	109.2
05/07/01	128.7	0.0	132.8	0.0	130.6	0.0	141.7	0.0	24.3	109.2
05/08/01	107.2	0.0	116.7	0.0	117.6	0.0	132.4	0.0	12.1	112.2
05/09/01	113.7	0.0	115.4	0.0	117.1	0.0	123.1	0.0	5.2	109.7
05/10/01	106.3	0.0	95.0	0.0	100.4	0.0	109.3	0.0	1.8	99.4

Gas Bubble Trauma Monitoring Results from Representative Sites on the Snake River and Columbia River

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank				Fish with L. Line GBT	
								Rank 1	Rank 2	Rank 3	Rank 4	Num Fish	Avg. Rank
Lower Granite Dam													
	05/01/01	Yearling Chinook	12	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/01/01	Steelhead	88	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/08/01	Yearling Chinook	26	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/08/01	Steelhead	74	0	0	0.00%	0.00%	0	0	0	0	0	0
Little Goose Dam													
	05/02/01	Yearling Chinook	51	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/02/01	Steelhead	49	0	0	0.00%	0.00%	0	0	0	0	0	0
Lower Monumental Dam													
	05/07/01	Yearling Chinook	22	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/07/01	Steelhead	78	0	0	0.00%	0.00%	0	0	0	0	0	0
McNary Dam													
	05/03/01	Yearling Chinook	32	1	0	0.00%	0.00%	0	0	0	0	1	1
	05/03/01	Steelhead	68	5	0	0.00%	0.00%	0	0	0	0	5	1
	05/07/01	Yearling Chinook	50	1	0	0.00%	0.00%	0	0	0	0	1	1
	05/07/01	Steelhead	50	1	0	0.00%	0.00%	0	0	0	0	1	1
	05/10/01	Yearling Chinook	58	4	0	0.00%	0.00%	0	0	0	0	4	1
	05/10/01	Steelhead	42	0	0	0.00%	0.00%	0	0	0	0	0	0
Bonneville Dam													
	05/01/01	Yearling Chinook	93	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/01/01	Steelhead	6	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/04/01	Yearling Chinook	70	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/04/01	Steelhead	30	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/08/01	Yearling Chinook	83	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/08/01	Steelhead	17	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/11/01	Yearling Chinook	41	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/11/01	Steelhead	1	0	0	0.00%	0.00%	0	0	0	0	0	0
Rock Island Dam													
	05/03/01	Yearling Chinook	38	3	1	2.63%	0.00%	1	0	0	0	2	1
	05/03/01	Steelhead	45	3	0	0.00%	0.00%	0	0	0	0	3	1
	05/07/01	Yearling Chinook	28	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/07/01	Steelhead	43	6	0	0.00%	0.00%	0	0	0	0	6	1
	05/10/01	Yearling Chinook	50	1	0	0.00%	0.00%	0	0	0	0	1	1
	05/10/01	Steelhead	50	0	0	0.00%	0.00%	0	0	0	0	0	0

Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	Hungry H. Dnst				Boundary				Grand Coulee				Grand C. Tlwr				Chief Joseph						
	24 h			12 h	24 h			12 h	24 h			12 h	24 h			12 h	24 h			12 h	#		
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High
4/27	105	106	107	23	106	107	108	24	110	110	110	1	107	108	108	24	109	109	109	23			
4/28	105	105	106	22	105	106	106	24	109	109	110	11	107	107	109	20	108	109	109	23			
4/29	104	105	106	23	105	105	106	24	108	108	109	24	106	106	108	23	108	108	109	23			
4/30	104	105	105	22	107	110	114	24	106	107	108	24	105	106	107	24	108	108	108	23			
5/1	104	105	105	22	109	111	112	24	105	105	106	24	104	105	106	24	107	107	107	23			
5/2	104	104	105	21	105	107	110	24	104	104	105	24	103	104	105	24	106	106	107	23			
5/3	104	105	106	22	106	110	113	24	105	106	107	24	104	105	106	23	106	107	108	23			
5/4	108	110	112	21	108	112	114	24	108	108	110	18	106	107	108	24	107	107	108	23			
5/5	109	110	111	24	105	106	111	24	106	107	109	24	106	106	107	24	106	107	107	23			
5/6	108	109	111	23	104	104	105	24	104	105	105	24	105	106	107	24	106	107	107	23			
5/7	109	110	111	23	106	108	112	24	106	107	107	24	105	106	106	24	106	106	107	23			
5/8	109	110	111	23	106	107	108	24	106	107	108	23	106	106	108	23	107	107	108	23			
5/9	109	110	111	22	108	110	112	24	105	105	106	24	105	106	108	24	108	108	108	23			
5/10	109	109	111	23	106	107	110	24	105	105	105	24	105	105	108	24	108	108	108	23			

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	Chief J. Dnst				Wells				Wells Dwnstrm				Rocky Reach				Rocky R. Tlwr						
	24 h			12 h	24 h			12 h	24 h			12 h	24 h			12 h	24 h			12 h	#		
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High
4/27	108	109	110	23	110	110	111	21	110	111	112	21	111	111	111	23	111	112	112	22			
4/28	107	108	109	23	109	110	110	23	110	110	111	23	111	111	111	22	111	111	111	22			
4/29	107	108	109	23	108	108	108	24	109	109	110	24	110	110	111	22	110	111	111	20			
4/30	107	108	109	23	107	108	108	23	108	109	110	23	110	110	110	21	110	110	110	20			
5/1	106	107	108	23	106	106	106	24	107	108	111	24	108	108	109	23	108	109	109	20			
5/2	105	106	107	23	105	106	106	21	107	108	108	21	107	107	107	23	107	107	107	22			
5/3	106	107	109	23	106	107	108	22	108	109	109	22	107	107	107	23	107	108	108	23			
5/4	107	108	108	22	108	109	109	22	109	110	111	22	108	108	109	23	108	109	109	22			
5/5	107	107	107	23	107	108	108	24	109	109	110	24	108	108	109	24	108	108	109	22			
5/6	106	107	107	23	106	107	107	24	108	109	110	24	107	107	107	22	107	107	108	22			
5/7	106	106	107	23	107	107	108	22	108	109	110	22	108	108	109	21	108	108	109	20			
5/8	107	107	108	23	107	108	108	21	109	110	110	21	109	110	110	23	109	109	110	20			
5/9	107	108	108	22	108	108	109	23	110	111	112	23	110	110	110	21	110	110	110	19			
5/10	107	108	108	23	108	108	108	23	110	110	111	23	109	109	110	22	109	109	110	19			

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island				Rock I. Tlwr				Wanapum				Wanapum Tlwr				Priest Rapids						
	24 h			12 h	24 h			12 h	24 h			12 h	24 h			12 h	24 h			12 h	#		
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High
4/27	107	107	108	22	118	119	119	22	---	---	---	0	---	---	---	0	---	---	---	0			
4/28	107	107	108	22	118	119	120	22	---	---	---	0	---	---	---	0	---	---	---	0			
4/29	106	106	107	23	116	117	117	23	114	114	115	24	111	111	111	24	110	111	112	24			
4/30	106	106	107	21	116	116	117	18	113	114	114	23	111	111	112	23	110	111	111	23			
5/1	103	104	105	22	114	115	116	21	111	111	112	24	110	110	111	24	112	113	114	24			
5/2	101	101	102	23	114	114	115	22	109	110	112	24	109	110	110	24	109	110	112	24			
5/3	101	101	101	23	109	114	114	23	110	110	111	24	109	109	109	11	110	112	113	24			
5/4	101	102	102	23	109	116	117	23	113	113	114	24	113	113	114	16	113	114	115	24			
5/5	100	100	101	22	116	116	117	21	111	112	113	24	112	112	113	24	110	111	112	24			
5/6	99	99	100	22	116	116	116	21	111	113	114	24	111	112	112	24	109	111	113	24			
5/7	100	100	101	20	115	116	116	19	113	115	117	24	112	113	113	23	112	114	117	23			
5/8	103	105	109	23	114	115	116	22	114	114	115	24	112	113	113	24	112	114	118	24			
5/9	108	108	108	20	114	115	115	18	112	112	113	24	112	112	112	24	111	111	112	24			
5/10	106	107	108	22	116	116	117	19	---	---	---	0	---	---	---	0	---	---	---	0			

Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

Total Dissolved Gas Saturation Data at Lower Columbia and Snake River Sites

Date	Priest R. Dnst			Pasco			Dworshak			Clrwtr-Peck			Anatone			#				
	24 h	12 h		24 h	12 h		24 h	12 h		24 h	12 h		24 h	12 h						
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
4/27	---	---	---	0	109	110	111	24	106	108	109	24	102	103	104	24	102	103	104	24
4/28	---	---	---	0	107	108	109	17	105	105	106	23	101	101	102	23	101	101	102	24
4/29	112	113	113	24	105	106	107	24	105	106	107	24	102	102	103	24	101	102	102	23
4/30	112	113	113	23	105	106	106	24	108	111	132	24	102	102	102	24	102	102	102	24
5/1	109	110	110	24	104	105	106	24	120	134	134	24	101	102	103	24	102	102	103	24
5/2	112	112	113	24	106	107	108	24	105	107	107	24	102	102	103	24	102	103	103	24
5/3	112	113	113	24	109	110	110	24	107	108	109	24	102	104	105	24	103	104	105	24
5/4	113	114	114	24	111	112	113	24	106	107	108	24	---	---	---	0	103	104	105	24
5/5	112	112	113	24	107	107	109	24	104	104	105	24	102	102	103	24	102	103	104	24
5/6	112	113	113	24	107	107	108	24	106	107	109	24	102	103	104	24	102	104	105	24
5/7	112	113	113	23	109	110	111	24	104	104	106	15	102	103	104	24	103	104	105	24
5/8	112	113	114	24	111	112	112	24	105	105	106	13	102	103	103	24	103	104	105	23
5/9	110	111	111	24	111	111	112	24	104	106	106	24	102	103	104	24	103	104	105	24
5/10	---	---	---	0	109	110	110	23	105	106	107	24	102	103	104	24	103	104	105	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clrwtr-Lewiston			Lower Granite			L. Granite Tlwr			Little Goose			L. Goose Tlwr			#				
	24 h	12 h		24 h	12 h		24 h	12 h		24 h	12 h		24 h	12 h						
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
4/27	102	103	104	24	107	108	109	23	103	104	104	24	107	109	112	24	104	105	106	24
4/28	101	101	101	23	104	104	106	24	103	104	104	24	103	104	105	16	103	103	104	24
4/29	101	102	103	23	102	102	102	24	102	102	102	22	103	103	103	1	102	102	102	24
4/30	101	101	101	24	101	101	102	24	101	101	102	24	102	102	103	6	102	102	102	24
5/1	100	101	101	24	99	99	100	24	99	99	100	24	101	101	102	24	101	101	101	24
5/2	100	101	101	24	99	99	99	24	99	99	99	24	100	100	101	23	99	100	100	24
5/3	101	103	104	24	100	102	103	24	99	100	100	23	100	100	103	12	99	100	100	24
5/4	102	104	105	24	103	104	105	24	101	101	102	24	101	102	103	16	101	101	102	24
5/5	100	101	102	24	102	102	104	24	101	101	101	24	99	99	100	11	100	100	100	24
5/6	100	102	103	24	103	103	105	24	102	102	102	24	102	103	139	15	100	100	100	24
5/7	101	103	105	24	104	105	106	24	103	103	104	24	102	103	107	19	100	101	101	24
5/8	102	104	105	24	103	103	104	24	103	103	104	24	103	103	105	15	101	102	102	24
5/9	102	104	105	24	103	103	103	24	102	102	103	24	102	102	102	20	102	102	102	24
5/10	102	103	105	24	103	104	105	24	102	103	103	23	103	103	104	21	103	103	104	24

Total Dissolved Gas Saturation Data at Snake and Lower Columbia River Sites

Date	Lower Mon.			L. Mon. Tlwr			Ice Harbor			Ice Harbor Tlwr			McNary-Oregon			#				
	24 h	12 h		24 h	12 h		24 h	12 h		24 h	12 h		24 h	12 h						
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
4/27	105	106	107	24	104	104	105	24	104	106	107	24	104	105	106	24	113	116	119	24
4/28	105	105	107	24	104	104	105	24	103	104	104	24	104	105	105	24	110	110	111	18
4/29	104	104	104	24	103	104	104	24	102	102	102	24	103	104	104	24	108	109	111	24
4/30	103	103	103	24	103	103	103	24	102	102	102	24	103	103	103	24	107	108	109	24
5/1	101	101	101	24	101	101	101	24	100	100	101	24	102	102	102	24	103	104	104	24
5/2	100	100	101	24	100	101	101	24	100	100	101	21	101	102	102	21	104	107	111	24
5/3	101	102	104	24	101	101	102	24	101	103	105	24	102	102	103	24	107	111	116	24
5/4	102	103	104	24	102	103	103	24	103	104	105	24	103	104	104	24	108	111	115	24
5/5	101	101	102	24	101	102	102	24	102	102	102	24	103	103	103	24	104	105	106	24
5/6	101	102	103	24	100	101	102	24	102	102	103	24	102	103	104	24	107	108	110	24
5/7	102	102	105	24	101	101	102	24	103	105	106	24	103	103	104	24	109	111	119	24
5/8	101	102	103	24	101	101	102	24	103	104	105	24	103	104	104	24	111	114	118	24
5/9	101	102	102	24	101	102	102	24	103	104	104	24	103	104	105	24	109	111	116	24
5/10	102	102	103	24	102	102	103	24	103	103	104	24	103	104	105	24	112	115	117	24

Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	McNary-Wash				McNary Tlwr				John Day				John Day Tlwr				The Dalles			
	24 h		12 h		#	24 h		12 h		#	24h		12h		#	24h		12h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
4/27	111	112	113	24	108	109	111	24	107	107	107	23	106	106	106	24	106	107	107	23
4/28	108	109	109	18	107	108	108	18	106	106	106	23	106	106	107	24	105	105	106	23
4/29	108	109	109	24	107	108	108	24	105	106	106	23	105	105	105	24	104	104	105	23
4/30	107	108	109	24	106	107	107	24	104	105	105	23	105	105	105	24	104	104	105	23
5/1	104	104	105	24	103	104	104	24	103	103	103	23	103	103	104	23	102	102	103	23
5/2	103	104	108	24	102	103	103	24	102	103	103	23	102	102	103	24	101	102	102	23
5/3	106	107	112	24	103	104	104	24	104	105	106	23	103	103	103	24	103	103	103	23
5/4	107	108	109	24	105	106	106	24	104	105	106	24	104	104	104	24	104	105	105	24
5/5	105	105	106	24	104	104	105	24	102	102	103	23	102	102	103	24	103	103	103	23
5/6	107	110	113	24	105	106	106	24	102	103	105	23	102	102	103	24	102	102	102	23
5/7	110	110	112	24	107	107	108	24	105	106	109	23	103	103	103	24	103	103	104	23
5/8	110	112	114	24	106	107	108	24	103	104	105	23	103	103	104	24	104	104	105	23
5/9	108	109	114	24	107	107	108	24	104	104	104	22	104	104	105	24	104	104	104	23
5/10	110	112	116	24	108	108	109	24	104	104	104	23	105	105	106	24	103	104	104	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	The Dalles Dnst				Bonneville				Warrendale				Skamania				Camas\Washugal			
	24 h		12 h		#	24 h		12 h		#	24h		12h		#	24h		12h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
4/27	106	107	107	24	107	107	107	23	107	107	108	23	106	106	107	23	107	108	109	24
4/28	104	105	105	24	105	106	107	23	105	106	106	23	105	105	106	23	106	106	107	24
4/29	104	104	104	24	104	104	105	23	105	105	105	22	104	104	104	23	104	105	105	24
4/30	103	104	104	24	104	104	104	23	104	104	104	23	103	104	104	23	103	103	104	24
5/1	102	102	102	24	102	102	103	23	103	103	103	23	102	102	102	23	102	103	104	24
5/2	102	102	103	24	102	102	103	23	103	103	104	23	102	102	103	23	103	105	105	24
5/3	103	104	104	23	103	104	104	23	104	105	106	23	103	104	104	23	104	106	107	24
5/4	104	105	105	23	105	105	106	24	105	106	106	24	104	105	105	24	106	107	108	24
5/5	102	102	103	24	103	103	105	23	103	104	105	23	103	103	104	23	104	105	106	24
5/6	102	102	104	24	103	104	104	23	104	105	106	23	103	104	104	23	105	106	107	24
5/7	103	104	104	24	104	105	106	23	105	106	107	22	104	105	106	22	105	107	108	24
5/8	103	104	105	24	105	105	105	23	106	106	107	23	105	105	106	23	106	108	109	24
5/9	103	104	105	23	106	107	140	21	105	105	106	19	104	104	105	23	106	107	108	20
5/10	104	104	105	24	104	104	105	22	104	105	106	23	104	105	105	23	105	107	108	24

HATCHERY RELEASE SUMMARY LAST TWO WEEKS

Hatchery Release Summary

From: 4/27/01 to 5/10/01

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
IDFG	Clearwater	ST	SU	2001	97,766	04-23-01	04-27-01	Redhouse (SFk ClearH20 R)	S Fk Clearwater River
IDFG	Magic Valley	ST	SU	2001	51,810	04-26-01	04-27-01	E Fk Salmon R	Salmon River
IDFG	Magic Valley	ST	SU	2001	75,912	04-09-01	06-04-01	Squaw Cr Acclim Pd	Salmon River
IDFG	Magic Valley	ST	SU	2001	98,623	05-02-01	05-03-01	Yankee Fk (Salmon R)	Salmon River
IDFG	Magic Valley	ST	SU	2001	169,606	04-30-01	05-02-01	Squaw Cr Acclim Pd	Salmon River
IDFG	Magic Valley	ST	SU	2001	224,338	05-04-01	05-07-01	Lemhi R	Salmon River
IDFG	Magic Valley	ST	SU	2001	430,210	04-10-01	04-27-01	Little Salmon R	Salmon River
IDFG	Niagara Springs	ST	SU	2001	165,000	05-03-01	06-02-01	Little Salmon R	Salmon River
IDFG	Niagara Springs	ST	SU	2001	889,995	04-14-01	05-05-01	Pahsimeroi H	Pahsimeroi River
IDFG	Sawtooth	SO	UN	2001	13,915	05-02-01	05-02-01	Redfish Lake Cr	Salmon River
IDFG	Sawtooth	ST	SU	2001	566,386	04-27-01	04-27-01	Sawtooth H	Salmon River
IDFG Total					2,783,561				
Nez Perce Tribe	Hagerman	ST	SU	2001	100,000	05-02-01	05-10-01	American R	S Fk Clearwater River
Nez Perce Tribe	Hagerman	ST	SU	2001	100,000	05-02-01	05-10-01	Newsome Cr	S Fk Clearwater River
Nez Perce Tribe	Kooskia	CO	UN	2001	20,000	05-10-01	05-11-01	Kooskia H	Clearwater Rvr M F
Nez Perce Tribe Total					220,000				
ODFW	Irrigon	ST	SU	2001	800	05-03-01	05-07-01	Deer Cr	Grande Ronde River
ODFW	Li Sheep	ST	SU	2001	80,000	05-10-01	05-11-01	L Sheep Acclim Pd	Imnaha River
ODFW	Wallowa	ST	SU	2001	108,750	05-05-01	05-15-01	Wallowa Acclim Pd	Grande Ronde River
ODFW Total					189,550				
Umatilla Tribe	Umatilla	ST	SU	2001	53,000	04-23-01	04-30-01	Minthorn Acclim Pd	Umatilla River
Umatilla Tribe Total					53,000				
USFWS	Dworshak	ST	SU	2001	1,300,000	04-23-01	04-27-01	Dworshak H	Clearwater Rvr M F
USFWS	Hagerman	ST	SU	2001	250,000	04-27-01	04-27-01	Sawtooth H	Salmon River
USFWS	Spring Creek	CH0	SP	2001	500,000	05-02-01	05-02-01	White Salmon R	White Salmon River
USFWS	Winthrop	ST	SU	2001	99,000	04-11-01	05-20-01	Winthrop H	Methow River
USFWS Total					2,149,000				
Warm Spgs Tribe	Oak Springs	ST	WI	2001	12,950	04-30-01	04-30-01	Parkdale Acclim Pd	Hood River
Warm Spgs Tribe	Oak Springs	ST	WI	2001	13,000	04-30-01	04-30-01	E Fk Irrig Dist Sand Trap	Hood River
Warm Spgs Tribe Total					25,950				
WDFW	East Bank	ST	SU	2001	33,475	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2001	45,500	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2001	48,058	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2001	57,814	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	Klickitat	CO	NO	2001	1,300,000	04-30-01	05-11-01	Klickitat H	Klickitat River
WDFW	Lyons Ferry	ST	SU	2001	40,000	04-02-01	04-30-01	Dayton Acclim Pd	Touchet River
WDFW	Lyons Ferry	ST	SU	2001	60,000	04-16-01	04-27-01	Lyons Ferry H	Snake River
WDFW	Lyons Ferry	ST	SU	2001	60,000	04-16-01	04-30-01	Tucannon R	Tucannon River
WDFW	Lyons Ferry	ST	SU	2001	100,000	03-26-01	04-30-01	Dayton Acclim Pd	Touchet River
WDFW	Lyons Ferry	ST	SU	2001	125,000	04-16-01	04-30-01	Walla Walla R	Walla Walla River
WDFW	Lyons Ferry	ST	SU	2001	135,000	04-16-01	04-30-01	Tucannon R	Tucannon River
WDFW	Lyons Ferry	ST	SU	2001	200,000	03-26-01	04-30-01	Cottonwood Acclim Pd	Grande Ronde River
WDFW	Methow	CH1	SP	2001	66,500	04-17-01	05-07-01	Twisp R	Methow River
WDFW	Skamania	ST	SU	2001	20,000	05-01-01	05-10-01	Little White Salmon R	Little White Salmon River
WDFW	Skamania	ST	SU	2001	100,000	05-01-01	05-10-01	Klickitat R	Klickitat River
WDFW	Skamania	ST	WI	2001	20,000	05-01-01	05-10-01	White Salmon R	White Salmon River
WDFW	Wells	CH1	SU	2001	424,787	04-19-01	04-27-01	Carlton Acclim Pd	Methow River
WDFW	Wells	CH1	SU	2001	430,000	04-23-01	05-07-01	Wells H	Mid-Columbia River
WDFW	Wells	ST	SU	2001	116,000	04-23-01	04-27-01	Chewuch R	Methow River
WDFW	Wells	ST	SU	2001	117,000	04-23-01	04-27-01	Methow R	Methow River
WDFW Total					3,499,134				

HATCHERY RELEASE SUMMARY LAST TWO WEEKS (CON'T)

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Yakima Tribe	Cascade	CO	UN	2001	853,000	04-24-01	05-05-01	Icicle Cr	Wenatchee River
Yakima Tribe	Cle Elum	CH1	SP	2001	232,700	03-15-01	05-31-01	Clark Flat Acclim Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2001	257,700	03-15-01	05-31-01	Jack Creek Acclim Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2001	266,600	03-15-01	05-31-01	Easton Pd	Yakama River
Yakima Tribe	Cle Elum	CO	UN	2001	97,450	05-07-01	05-07-01	Cle Elem Slough	Yakama River
Yakima Tribe	Eagle Creek	CO	UN	2001	260,319	04-25-01	05-15-01	Winthrop H	Methow River
Yakima Tribe	Easton Pond	CO	UN	2001	115,000	05-07-01	05-07-01	Easton Pd	Yakama River
Yakima Tribe	Klickitat	CH0	SP	2001	160,000	05-07-01	05-09-01	Upper Klickitat R	Klickitat River
Yakima Tribe	Lost Creek	CO	UN	2001	115,000	05-07-01	05-07-01	Lost Creek Acclim Pd	Yakama River
Yakima Tribe	Stiles Pond	CO	UN	2001	115,000	05-07-01	05-07-01	Naches R	Yakama River
Yakima Tribe Total					2,472,769				
Grand Total					11,392,964				

CH=Chinook, ST=Steelhead, CO=Coho,
CM=Chum, CT=Cutthroat Trout,
SO=Sockeye

HATCHERY RELEASE SUMMARY NEXT TWO WEEKS

Hatchery Release Summary

From: 5/11/01 to 5/24/01

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
IDFG	Magic Valley	ST	SU	2001	75,912	04-09-01	06-04-01	Squaw Cr Acclim Pd	Salmon River
IDFG	Niagara Springs	ST	SU	2001	165,000	05-03-01	06-02-01	Little Salmon R	Salmon River
IDFG Total					240,912				
Nez Perce Tribe	Kooskia	CO	UN	2001	20,000	05-10-01	05-11-01	Kooskia H	Clearwater Rvr M F
Nez Perce Tribe	Lyons Ferry	CH0	FA	2001	400,000	05-23-01	06-01-01	Pittsburg Landing	Snake River
Nez Perce Tribe	Lyons Ferry	CH0	FA	2001	500,000	05-23-01	06-22-01	Big Canyon (Clearwater R)	Clearwater Rvr M F
Nez Perce Tribe	Lyons Ferry	CH0	FA	2001	500,000	05-23-01	06-22-01	Cpt John Acclim Pd	Snake River
Nez Perce Tribe Total					1,420,000				
ODFW	Big Canyon	ST	SU	2001	130,500	05-19-01	06-03-01	Big Canyon Acclim.Pd	Grande Ronde River
ODFW	Li Sheep	ST	SU	2001	80,000	05-10-01	05-11-01	L Sheep Acclim Pd	Imnaha River
ODFW	Wallowa	ST	SU	2001	108,750	05-05-01	05-15-01	Wallowa Acclim Pd	Grande Ronde River
ODFW	Wallowa	ST	SU	2001	108,750	05-13-01	05-27-01	Wallowa Acclim Pd	Grande Ronde River
ODFW Total					428,000				
Umatilla Tribe	Umatilla	CH0	FA	2001	2,682,000	05-21-01	05-31-01	Thornhollow Acclim Pd	Umatilla River
Umatilla Tribe Total					2,682,000				
USFWS	Winthrop	ST	SU	2001	99,000	04-11-01	05-20-01	Winthrop H	Methow River
USFWS Total					99,000				
Warm Spgs Tribe	Oak Springs	ST	WI	2001	12,950	05-14-01	05-14-01	Parkdale Acclim Pd	Hood River
Warm Spgs Tribe	Oak Springs	ST	WI	2001	13,000	05-14-01	05-14-01	E Fk Irrig Dist Sand Trap	Hood River
Warm Spgs Tribe Total					25,950				
WDFW	East Bank	ST	SU	2001	33,475	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2001	45,500	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2001	48,058	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2001	57,814	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	Klickitat	CO	NO	2001	1,300,000	04-30-01	05-11-01	Klickitat H	Klickitat River
WDFW Total					1,484,847				
Yakima Tribe	Cle Elum	CH1	SP	2001	232,700	03-15-01	05-31-01	Clark Flat Acclim Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2001	257,700	03-15-01	05-31-01	Jack Creek Acclim Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2001	266,600	03-15-01	05-31-01	Easton Pd	Yakama River
Yakima Tribe	Eagle Creek	CO	UN	2001	260,319	04-25-01	05-15-01	Winthrop H	Methow River
Yakima Tribe Total					1,017,319				
Grand Total					7,398,028				

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
04/27/2001 *	414	523	704	271	75.750	6.493	11.880	200	2,980	1,480	27.945
04/28/2001 *	---	22	---	13	52.350	8.989	17.070	70	2,960	3,336	24.143
04/29/2001 *	---	92	---	32	132.600	25.452	16.770	57	3,885	6,496	24.831
04/30/2001 *	1,421	32	757	40	137.550	34.333	13.195	51	6,180	11,865	38.804
05/01/2001	688	138	639	46	155.400	25.941	9,200	62	5,203	23,640	39,730
05/02/2001	369	114	235	5	85.062	23.348	8,100	58	9,705	9,275	46,811
05/03/2001	392	127	224	9	47,400	13,379	5,650	60	10,200	7,740	57,688
05/04/2001	189	84	111	9	32,550	12,116	7,590	41	16,173	3,660	55,805
05/05/2001 *	---	20	---	---	61,350	12,706	7,170	72	22,050	9,454	60,603
05/06/2001	---	68	---	---	69,450	13,803	7,860	65	18,156	9,020	54,725
05/07/2001 *	62	52	54	2	29,850	17,057	3,997	62	14,600	6,310	52,420
05/08/2001	67	16	39	2	18,450	16,986	6,438	77	19,103	7,690	48,663
05/09/2001	30	55	46	0	27,176	7,564	7,180	120	30,270	8,260	45,821
05/10/2001 *	116	144	126	0	66,000	21,772	17,963	192	20,851	12,608	36,908
05/11/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	3,748	1,487	2,935	429	990,938	239,939	140,063	1,187	182,316	120,834	614,897
# Days:	10	14	10	12	14	14	14	14	14	14	14
Average:	375	106	294	36	70,781	17,139	10,005	85	13,023	8,631	43,921
YTD	12,315	26,081	8,034	448	1,196,206	259,020	257,336	3,853	208,190	138,181	793,735

COMBINED SUBYEARLING CHINOOK

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
04/27/2001 *	0	0	0	0	0	0	0	8	90	10	10,946
04/28/2001 *	---	0	---	0	0	0	30	1	40	6	9,857
04/29/2001 *	---	0	---	0	0	0	0	5	165	10	5,088
04/30/2001 *	0	0	0	0	0	0	0	12	30	30	9,170
05/01/2001	0	0	0	0	0	0	0	9	260	30	9,807
05/02/2001	0	0	0	0	0	0	0	21	40	150	6,305
05/03/2001	0	0	0	0	0	0	0	13	40	0	7,809
05/04/2001	0	0	0	0	0	0	0	3	20	30	3,243
05/05/2001 *	---	0	---	---	0	0	0	10	300	8	2,857
05/06/2001	---	0	---	---	0	0	0	2	150	0	5,282
05/07/2001 *	0	0	0	2	150	0	0	2	250	20	3,953
05/08/2001	0	0	0	0	0	0	1	3	510	10	4,599
05/09/2001	0	0	0	1	0	0	1	3	360	0	3,072
05/10/2001 *	0	0	0	0	0	0	101	4	250	1	2,141
05/11/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	3	150	0	133	96	2,505	305	84,129
# Days:	10	14	10	12	14	14	14	14	14	14	14
Average:	0	0	0	0	11	0	10	7	179	22	6,009
YTD	1	1	0	6	170	0	133	302	3,893	325	537,969

*The total, #days and average do not include the current day's data. *See sampling comments. [http://www.fpc.org/current daily/smpcomments.htm](http://www.fpc.org/current%20daily/smpcomments.htm). This means that one or more of the sites on this date had an incomplete or biased sample.

These data are preliminary and have been derived from various sources. For verification and/or origin of these data, contact the operators of the Fish Passage Data System at (503) 230-4099.

Smolt indices, clipped & unclipped or combined, are presented in the following order: yearling chinook (chinook 1's,) subyearling chinook (chinook 0's), steelhead, coho, and sockeye. Two classes of fish counts are shown in these tables: collection counts, which account for sample rates but are not adjusted for flow; and passage indices, which are collection counts divided by the proportion of water passing through the sampled powerhouse. Passage indices are not population estimates, but are used to adjust collection counts for daily fluctuations in the site's or project's operations. The classes of counts presented in the report are defined below for each site. Most samples occur over a 24-hr period that spans two calendar days. In this report, the date shown corresponds with the sample end date.

Two-Week Summary of Passage Indices

COMBINED COHO

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
04/27/2001 *	0	0	0	0	0	0	0	5	120	30	258
04/28/2001 *	---	0	---	0	0	0	60	7	20	36	714
04/29/2001 *	---	0	---	0	0	0	0	3	45	46	360
04/30/2001 *	0	0	0	0	0	0	0	2	135	60	1,576
05/01/2001	0	0	0	1	0	0	0	9	200	150	2,219
05/02/2001	0	0	0	0	0	0	0	6	300	0	4,586
05/03/2001	0	0	0	0	150	201	0	9	340	60	8,980
05/04/2001	0	0	0	0	0	300	0	16	580	30	10,956
05/05/2001 *	---	0	---	---	0	900	0	7	450	48	16,091
05/06/2001	---	0	---	---	300	150	0	5	350	0	10,564
05/07/2001 *	0	0	0	1	0	100	0	8	800	60	16,839
05/08/2001	0	0	0	0	0	100	12	16	330	40	28,634
05/09/2001	0	0	0	0	0	0	0	29	390	20	12,799
05/10/2001 *	0	0	0	0	0	150	0	69	100	40	9,447
05/11/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	2	450	1,901	72	191	4,160	620	124,023
# Days:	10	14	10	12	14	14	14	14	14	14	14
Average:	0	0	0	0	32	136	5	14	297	44	8,859
YTD	0	0	0	4	500	1,900	72	202	4,670	1,032	127,104

COMBINED STEELHEAD

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
04/27/2001 *	349	1,617	250	14	91,050	2,030	1,040	31	11,008	1,640	2,447
04/28/2001 *	---	192	---	30	141,900	5,361	2,040	41	5,661	810	1,429
04/29/2001 *	---	1,180	---	391	221,700	14,050	2,220	60	4,365	1,850	2,878
04/30/2001 *	426	124	438	78	347,550	29,712	1,965	42	4,879	3,930	5,820
05/01/2001	505	859	632	1,253	309,450	22,415	6,200	60	6,537	24,600	4,120
05/02/2001	313	902	248	189	346,138	32,740	6,800	74	6,401	12,215	4,586
05/03/2001	258	570	215	111	243,150	21,752	6,300	68	7,260	7,560	7,418
05/04/2001	105	359	114	183	152,400	17,306	6,360	107	9,268	5,010	13,010
05/05/2001 *	---	108	---	---	210,300	22,703	3,060	125	7,950	4,468	16,692
05/06/2001	---	421	---	---	195,150	12,950	5,190	110	5,705	4,730	8,656
05/07/2001 *	108	248	131	264	112,500	12,904	7,213	77	6,300	4,770	8,346
05/08/2001	151	359	108	290	60,450	14,166	7,729	83	6,020	3,410	7,863
05/09/2001	107	604	34	352	77,924	15,003	5,658	197	6,120	2,180	8,192
05/10/2001 *	169	2,132	79	198	115,200	25,253	7,826	312	4,300	1,314	6,802
05/11/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	2,491	9,675	2,249	3,353	2,624,862	248,345	69,601	1,387	91,774	78,487	98,259
# Days:	10	14	10	12	14	14	14	14	14	14	14
Average:	249	691	225	279	187,490	17,739	4,972	99	6,555	5,606	7,019
YTD	3,494	14,722	3,408	3,560	2,813,916	254,098	78,113	1,570	141,158	91,272	108,683

Two-Week Summary of Passage Indices

COMBINED SOCKEYE

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
04/27/2001 *	0	0	0	0	0	100	20	0	0	0	0
04/28/2001 *	---	0	---	0	0	20	0	3	20	0	0
04/29/2001 *	---	0	---	0	0	300	0	3	15	0	0
04/30/2001 *	0	0	0	0	0	100	0	11	15	15	0
05/01/2001	0	0	0	0	0	600	0	13	20	0	0
05/02/2001	0	0	0	0	0	0	0	16	80	150	0
05/03/2001	0	0	0	0	0	2,900	50	4	200	0	293
05/04/2001	0	0	0	0	0	800	0	1	140	30	0
05/05/2001 *	---	0	---	---	0	200	30	4	150	8	0
05/06/2001	---	0	---	---	0	1,500	30	0	250	0	0
05/07/2001 *	0	0	0	0	0	550	1	0	250	0	0
05/08/2001	0	0	0	0	0	300	6	0	480	0	0
05/09/2001	0	0	0	0	0	50	0	0	300	20	0
05/10/2001 *	0	0	0	0	0	50	5	9	150	1	0
05/11/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	0	7,470	142	64	2,070	224	293
# Days:	10	14	10	12	14	14	14	14	14	14	14
Average:	0	0	0	0	0	534	10	5	148	16	21
YTD	0	0	0	0	490	7,846	172	108	2,216	272	354

Definitions for Smolt Index Counts

WTB (Collection) = Salmon River Trap at Whitebird : Collection Counts

IMN (Collection) = Imnaha River Trap : Collection Counts

GRN (Collection) = Grande Ronde River Trap : Collection Counts

LEW (Collection) = Snake River Trap at Lewiston : Collection Counts

LGR (Index) = Lower Granite Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

LGS (Index) = Little Goose Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

LMN (Index) = Lower Monumental Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

RIS (Index) = Rock Island Dam Second Powerhouse Bypass Trap : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 2 Flow / (Powerhouse 1 & 2 Flow + Spill)}

MCN (Index) = McNary Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

JDA (Index) = John Day Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

BO2 (Index) = Bonneville Dam Second Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 2 Flow / (Powerhouse 1 & 2 Flow + Spill)}

BO1 (Index) = Bonneville Dam First Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 1 Flow / (Powerhouse 1 & 2 Flow + Spill)}

JDA and BO2 data collected for the FPC by Pacific States Marine Fisheries Commission.

RIS data collected for the FPC by Chelan Co. PUD/Washington Dept. of Fish and Wildlife.

LGR, LMN, and MCN data collected for the FPC by Washington Dept. of Fish and Wildlife.

LGS and GRN data collected for the FPC by Oregon Dept. of Fish and Wildlife.

IMN data collected for the FPC by the Nez Perce Tribe.

Cumulative Adult Passage at Mainstem Dams Through 05/10

DAM	Spring Chinook						Summer Chinook						Fall Chinook					
	2001		2000		10-Yr Avg.		2001		2000		10-Yr Avg.		2001		2000		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	345,879	7,528	159,412	14,791	60,224	2,780	0	0	0	0	0	0	0	0	0	0	0	0
TDA	252,989	3,132	81,769	7,524	29,734	1,212	0	0	0	0	0	0	0	0	0	0	0	0
JDA	217,506	2,416	66,834	5,968	23,410	1,002	0	0	0	0	0	0	0	0	0	0	0	0
MCN	205,787	1,768	44,776	4,372	18,523	756	0	0	0	0	0	0	0	0	0	0	0	0
IHR	130,196	1,013	24,923	3,174	8,813	421	0	0	0	0	0	0	0	0	0	0	0	0
LMN	131,133	359	21,323	3,065	7,068	390	0	0	0	0	0	0	0	0	0	0	0	0
LGS	121,982	928	19,437	2,488	5,882	316	0	0	0	0	0	0	0	0	0	0	0	0
LWG	115,128	397	17,796	2,153	4,960	249	0	0	0	0	0	0	0	0	0	0	0	0
PRD	37,407	56	10,747	80	4,103	17	0	0	0	0	0	0	0	0	0	0	0	0
RIS	22,437	89	4,470	42	1,243	5	0	0	0	0	0	0	0	0	0	0	0	0
RRH	7,877	20	490	3	138	1	0	0	0	0	0	0	0	0	0	0	0	0
WEL	3,610	25	87	5	53	1	0	0	0	0	0	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			Wild 2001
	2001		2000		10-Yr Avg.		10-Yr			10-Yr			
	Adult	Jack	Adult	Jack	Adult	Jack	2001	2000	Avg.	2001	2000	Avg.	
BON	0	0	0	0	0	0	0	0	0	3,609	2,268	2,663	967
TDA	0	0	0	0	0	0	0	0	0	884	529	1,075	320
JDA	0	0	0	0	0	0	0	0	0	2,155	2,962	2,690	829
MCN	0	0	0	0	0	0	0	0	0	1,460	648	1,753	694
IHR	0	0	0	0	0	0	0	0	0	1,328	838	2,112	523
LMN	0	0	0	0	0	0	1	0	0	1,690	940	2,111	856
LGS	0	0	0	0	0	0	0	0	0	1,942	891	1,154	991
LWG	0	0	0	0	0	0	0	0	0	5,634	2,442	4,786	1,590
PRD	0	0	0	0	0	0	2	0	0	20	4	25	**
RIS	0	0	0	0	0	0	0	1	0	45	19	46	28
RRH	0	0	0	0	0	0	0	0	0	79	63	46	33
WEL	0	0	0	0	0	0	0	0	0	12	10	8	11

RRH is through 05/06; RIS is through 05/07; PRD, TDA are through 05/08; WEL is through 05/09.

LGR is missing counts for 05/02.

These numbers were collected from the COE's Running Sums text files.

Wild steelhead numbers are included in the total.

**PRD is not reporting Wild Steelhead numbers.

Historic counts (pre-1996) were obtained from CRITFC and compiled by the FPC.

Historic counts 1997 to present were obtained from the Corps of Engineers.

Two Week Transportation Summary

		04/28/01 TO 05/11/01					
		Species					
Site	Data	CH0	CH1	CO	ST	SO	Grand Total
LGR	Sum of NumberCollected	150	990,938	450	2,624,862		3,616,400
	Sum of NumberBarged	150	989,535	450	2,616,959		3,607,094
	Sum of NumberBypassed	0	414	0	7,668		8,082
	Sum of Numbertrucked	0	0	0	0		0
	Sum of TotalProjectMortalities	0	989	0	235		1,224
LGS	Sum of NumberCollected		239,939	1,901	248,345	7,470	497,655
	Sum of NumberBarged		239,152	1,900	248,145	7,460	496,657
	Sum of NumberBypassed		0	0	0	0	0
	Sum of Numbertrucked		0	0	0	0	0
	Sum of TotalProjectMortalities		787	1	200	10	998
LMN	Sum of NumberCollected	133	140,063	72	69,601	142	210,011
	Sum of NumberBarged	132	135,657	72	69,280	139	205,280
	Sum of NumberBypassed	0	4,062	0	123	0	4,185
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	1	344	0	198	3	546
MCN	Sum of NumberCollected	2,505	182,316	4,160	91,774	2,070	282,825
	Sum of NumberBarged	1,200	81,985	2,176	34,033	916	120,310
	Sum of NumberBypassed	1,294	99,869	1,979	57,640	1,150	161,932
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	11	462	5	101	4	583
Total Sum of NumberCollected		2,788	1,553,256	6,583	3,034,582	9,682	4,606,891
Total Sum of NumberBarged		1,482	1,446,329	4,598	2,968,417	8,515	4,429,341
Total Sum of NumberBypassed		1,294	104,345	1,979	65,431	1,150	174,199
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of TotalProjectMortalities		12	2,582	6	734	17	3,351

YTD Transportation Summary

TO: 05/11/01

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	170	1,196,206	500	490	2,813,916	4,011,282
	Sum of NumberBarged	170	1,187,586	470	318	2,800,259	3,988,803
	Sum of NumberBypassed	0	821	0	0	10,007	10,828
	Sum of NumberTrucked	0	6,433	30	167	3,386	10,016
	Sum of TotalProjectMortalities	0	1,366	0	5	264	1,635
LGS	Sum of NumberCollected		259,457	1,901	7,847	254,219	523,424
	Sum of NumberBarged		257,712	1,900	7,806	253,679	521,097
	Sum of NumberBypassed		0	0	0	0	0
	Sum of NumberTrucked		898	0	28	336	1,262
	Sum of TotalProjectMortalities		847	1	13	204	1,065
LMN	Sum of NumberCollected	133	257,336	72	172	78,113	335,826
	Sum of NumberBarged	132	246,798	72	169	77,434	324,605
	Sum of NumberBypassed	0	4,340	0	0	145	4,485
	Sum of NumberTrucked	0	5,519	0	0	319	5,838
	Sum of TotalProjectMortalities	1	679	0	3	215	898
MCN	Sum of NumberCollected	3,894	208,216	4,671	2,216	141,200	360,197
	Sum of NumberBarged	1,200	81,985	2,176	916	34,033	120,310
	Sum of NumberBypassed	2,676	125,718	2,489	1,296	107,022	239,201
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	18	513	6	4	145	686
Total Sum of NumberCollected		4,197	1,921,215	7,144	10,725	3,287,448	5,230,729
Total Sum of NumberBarged		1,502	1,774,081	4,618	9,209	3,165,405	4,954,815
Total Sum of NumberBypassed		2,676	130,879	2,489	1,296	117,174	254,514
Total Sum of NumberTrucked		0	12,850	30	195	4,041	17,116
Total Sum of TotalProjectMortalities		19	3,405	7	25	828	4,284